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Memorandum

To: LaDonna Turner, Site Assessment Manager
Technical and Enforcement Branch
U.S. Environmental Protection Agency, Region 6

From: Dana Bahar, Manager, Superfund Oversight Section
Ground Water Quality Bureau, New Mexico Environment Department.

Date: September 10, 2009

Subject: Pre-CERCLIS Screening Assessment of Blue Peak Mine, McKinley
County, New Mexico: Further action under CERCLA recommended

Site name	Blue Peak Mine				
City	not applicable	State	New Mexico	Zip code	not applicable
County	McKinley				
Latitude	35° 20' 28.77"	Longitude	107° 50' 41.92"		

Site physical description: The Blue Peak Mine currently has one partially-closed mine adit, and one remaining open adit along the south side of Mesa Montanosa along 2 major bench-cut roads approximately $\frac{3}{4}$ mile long approximately 50 feet below the mesa top; other adits that were used during the period of site operation reportedly have been reclaimed. An open vent shaft, which reportedly connects to the mine tunnels, also was located on the mesa top. The remaining adits emit elevated levels of radioactivity. The site is well-vegetated, and few distinct waste piles remain, although some have moderately elevated radioactivity in comparison to background (15-45 counts per second [cps]). An outcrop of unmined ore-bearing sandstone exposed along the upper bench road also exhibits elevated radioactivity (~1200 cps; see Figure 1).

Site identification: Potential alluvial ground water contamination within the Grants Mineral Belt was identified because background standards established for the contaminants of concern for ongoing remedial action associated with the Homestake Mining Company NPL site (CERCLIS NMD0007860935) are generally higher than Maximum Contaminant Levels (MCLs). NMED conducted sampling of private residential wells in subdivisions located in the vicinity of the HMC site, and found that the majority had one or more contaminant concentrations exceeding MCLs.

Site summary: Observations made during NMED's Site reconnaissance are shown on the accompanying figures. One open adit and partially-open adit with radioactivity elevated above background are visible along the upper bench cut road. Most remaining waste rock has only slightly elevated radioactivity (maximum=679 cps; background=14-45 cps). Most waste appears to have been contoured to minimize erosion. An open vent shaft on the mesa top that is not well-

marked could be hazardous to humans, livestock, and wildlife, and could provide an avenue for aquifer cross-contamination.

Targets: Residences are located near the junction of State Hwy. 605 and 509, approximately 3.65 air-miles east-northeast of the Site. Another residence is located along Haystack Road approximately 0.7 air-miles south of the Site, from which another residence is visible further to the west. Other potential targets may include cattle and wildlife.

Closest well sampled to date: irrigation well SMC-22 (1.58 air-miles; 48.2 µg/l total uranium in 2008 sampling [total uranium Maximum Contaminant Level=30 µg/l]).

Site ownership and Potentially Responsible Parties: Surface and mineral rights reportedly are held by the Bureau of Land Management (BLM). Garcia Mines reportedly last operated the mine in 1965.

File review: NMED staff reviewed the following files:

- Database compiled by Mining and Minerals Division of the New Mexico Energy, Minerals, and Natural Resources Department (07/20/2007).
- Anderson, Orin J., 1980. "Abandoned or inactive uranium mines in New Mexico".
- McLemore, Virginia T. and William L. Chenoweth, 1991. "Uranium mines and deposits in the Grants district, Cibola and McKinley Counties, New Mexico." New Mexico Bureau of Mines and Mineral Resources Open-file report 353.
- Rappaport, Linda, "Uranium deposits of the Poison Canyon ore trend, Grants District," in "Geology and technology of the Grants Uranium Region, 1963. State Bureau of Mines and Mineral Resources.
- Souder, Miller, and Associates, 2008. "Abandoned uranium mine field survey project."
- U.S. Geological Survey, 1997. "Gallup quadrangle NURE HSSR study." OFR-97-492.

Site reconnaissance: NMED staff conducted a Site reconnaissance on June 3, 2009.

Recommendations: A release of CERCLA hazardous substances has been documented at the site. NMED recommends further investigation under CERCLA to assess the risk posed by the site using the Hazard Ranking System.

NMED recommends that the investigation include the following:

1. Sample sediments along drainages to characterize extent of Site-derived waste dispersion.
2. Investigate and characterize ground water impacts.

In addition NMED recommends the following actions be performed to address immediate threats to public health and the environment:

1. Remove waste with elevated radioactivity.
2. Seal open adits and vent hole.

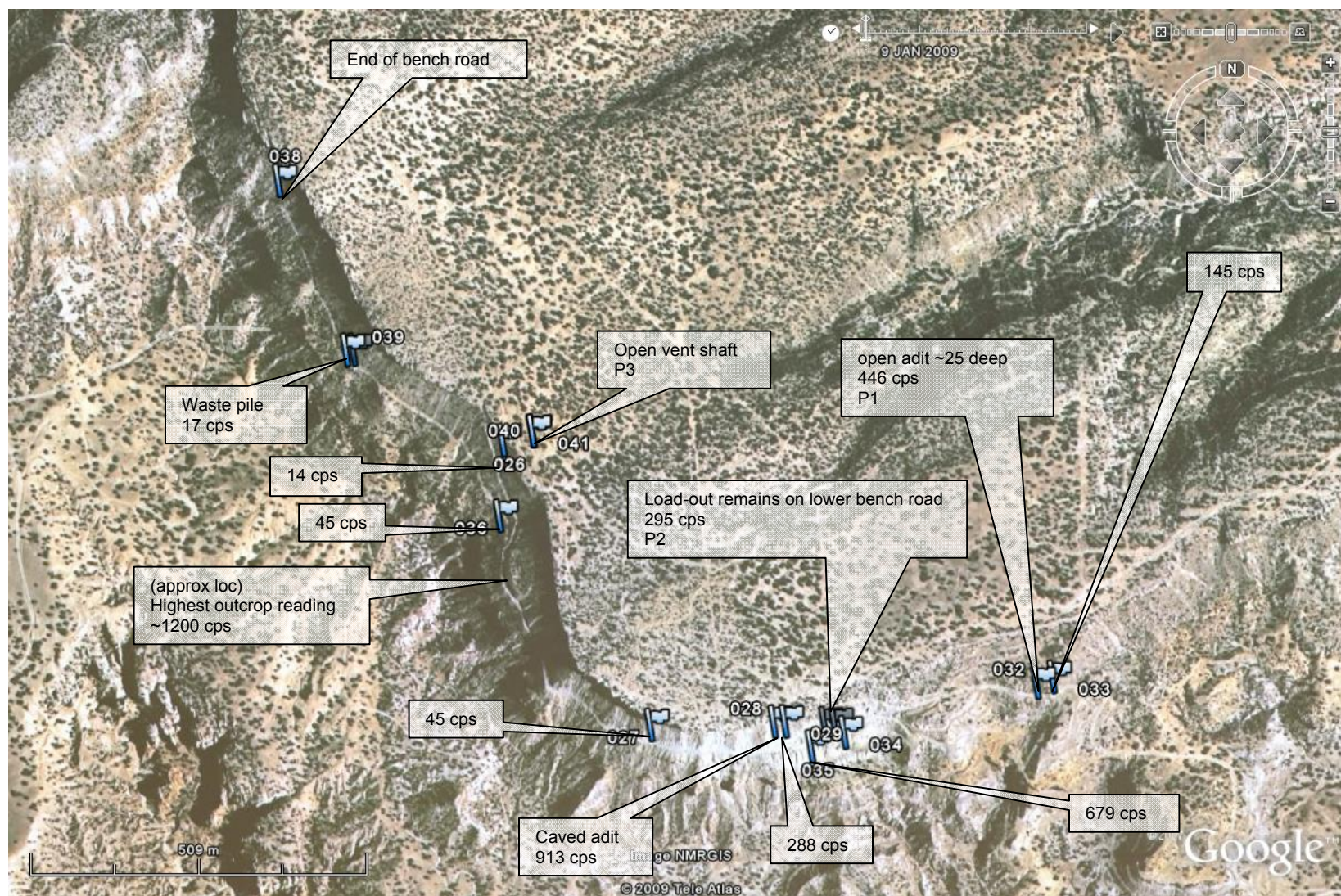


Figure 1: Blue Peak Mine—measurements taken June 3, 2009

“Px” reference the location of photographs on pages following.



P1: Blue Peak mine open adit



P2: Blue Peak mine load-out facility remains



P3: Blue Peak mine open vent shaft on mesa top.

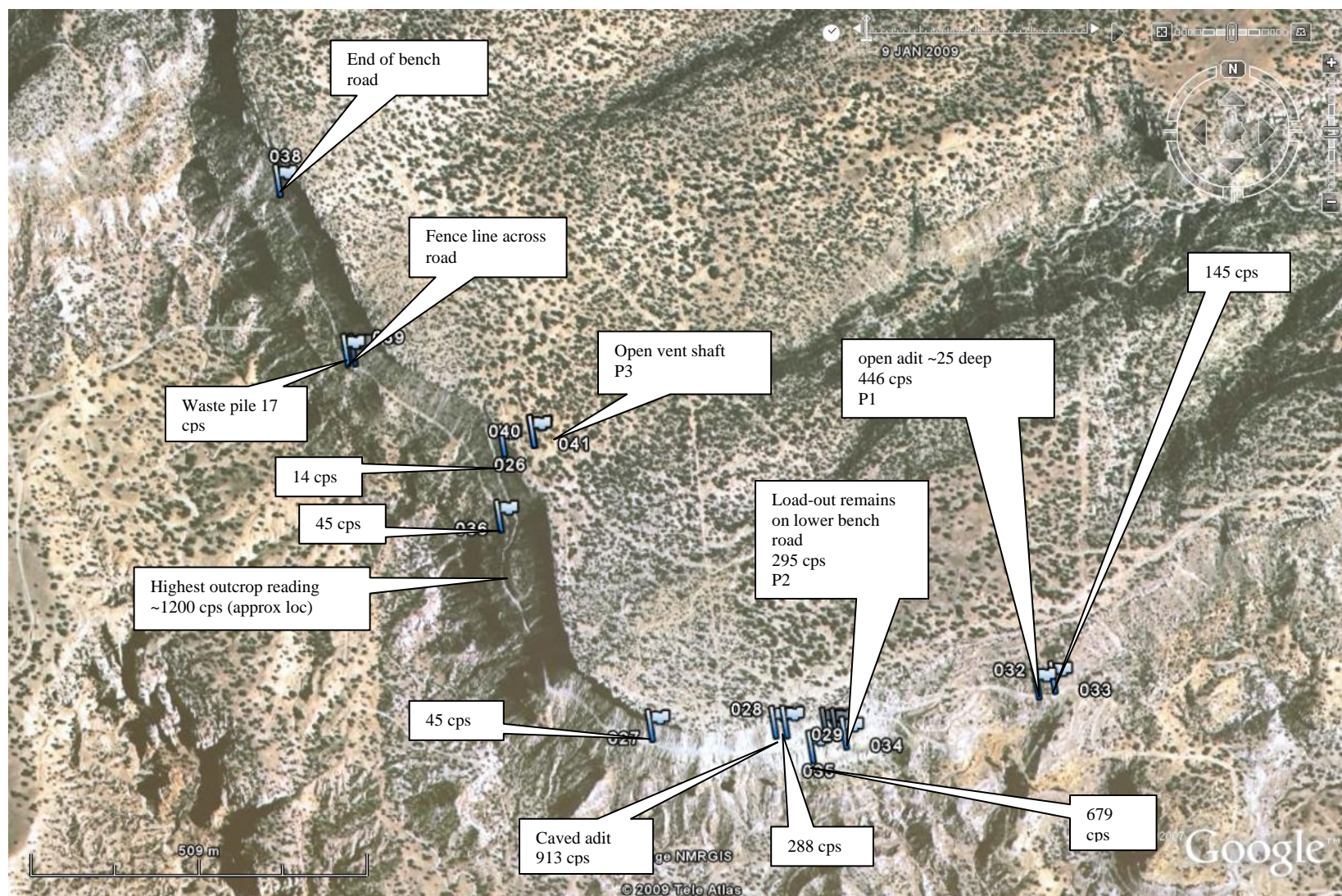


Blue Peak mine: view towards southwest

Ms. LaDonna Turner, EPA Region 6 Site Assessment Manager
Pre-CERCLIS Screening Assessment of Blue Peak mine, McKinley County, New Mexico
September 10, 2009



Blue Peak mine view towards southwest showing residences (arrows)





P1: Blue Peak mine open adit



P2: Blue Peak mine load-out facility remains



P3: Blue Peak mine open vent shaft on mesa top.



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